

Retracement Portion West Bdy., T. 30 S., R. 7 W.

CHAINS

Survey commenced March 21, 1918 and executed with a W. and L. E. Gurley solar compass, not numbered. The instrument is provided with two double verniers placed opposite each other, reading to single minutes of arc, which is also the least count of the vernier of the latitude arc, the vernier of the declination arc reads to thirty seconds.

The instrument was examined and tested and approved by the Assistant Supervisor of Surveys for Oregon, February 14, 1918, subject to a satisfactory field test.

I examine the adjustments of the instrument and find no errors; then to test the solar apparatus, by comparing its indications resulting from solar observations made during a.m. and p.m. hours with a meridian determined by observations on Polaris, I proceed as follows:

March 11, 1918, at my camp near the center of sec. 9, T. 31 S., R. 7 W., in lat. $42^{\circ}53'$ N., long. $123^{\circ}32'$ W., I set off $42^{\circ}53'$ on the lat. arc; $3^{\circ}43'$ S. on the decl. arc; and at 3h p.m., l.m.t., determine a meridian with the solar and mark a point thereof by a tack in a peg, driven firmly in the ground, 5 chs. N. of my station.

At 8h 11m p.m., l.m.t., I observe Polaris at western elongation in accordance with instructions in the Manual of 1902 and mark a point thereof on a peg, driven in the ground 5 chs. N. of my station.

March 11, 1918.

March 12, 1918: At 7h 50m a.m., I lay off the azimuth of Polaris, $1^{\circ}32'$ to the east, the meridian thus determined coincides with the meridian obtained yesterday with the solar.

At 8h 0m a.m., l.m.t., I set off $42^{\circ}53'$ on the lat. arc; $3^{\circ}25'30''$ S. on the decl. arc; and determine a meridian with the solar, which coincides with the meridian determined by Polaris observation.

The solar apparatus, by a.m. and p.m. observations, defines positions for meridians identical with the meridian determined by Polaris observation; therefore, I conclude that the adjustments are correct.

The magnetic bearing of the true meridian at 8h 5m a.m. is N. $20^{\circ}45'$ W., the angle thus determined gives the mag. decl. $20^{\circ}45'$ E.

March 12, 1918.

All measurements are made with a Lallie steel tape, 5 chs. in length and clinometers used to determine the vertical angles. All distances are reduced to the horizontal, which alone appear in these notes.

I commence at the cor. of Tps. 30 and 31 S., Rs. 7 and 8 W., which is located by reference to the bearing trees.

At the exact corner point

Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the ground, for cor. of Tps. 30 and 31 S., Rs. 7 and 8 W., with brass cap mkd.

T 30 S	
R 8 W	R 7 W
S 36	S 31
S 1	S 6
T 31 S	
1918	